nTOF Session

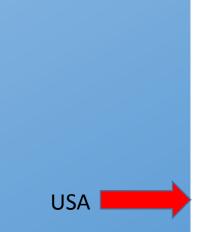
Transformative Hadron Beamlines Workshop

July 21-23, 2014, Brookhaven National Laboratory

nTOF (white sources) Facilities

■ Table 1
Parameters of several neutron time-of-flight facilities. For the new facilities parameters still may improve





USA

Closed

Items for Discussion

- What are the requirements from a new nTOF facility?
 - Community interest
 - International ND meetings have about 450 attendees.
 - Only two TOF (white spectrum) facilities in the US (~7 elsewhere)
 - Possible Funding for n-TOF experiments
 - DOE BES, NNSA, NE, NCSP, NR, other
 - NSF astrophysics, high energy basic science.
 - Other ??
- How can the BNL facility be different / better?
 - Large number of neutrons per pulse (>10¹⁵ n/pulse)
 - High energy resolution (~2 ns FWHM proton pulse, optimized production target and detection systems, long flight paths 200+m)
 - Short and long flight path (short enable very high n flux)
 - Propose NEW interesting experiments (scattering in the resonance region, fission physics, measurements of small and radioactive samples, surrogate reactions, high energy interactions E>1 GeV, nuclear structure measurement)